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COMPLEMENTARITIES BETWEEN THE DEVELOPMENT STRATEGY OF "NIS" AND THE ENERGY POLICY OF SERBIA *

Komplementarnost razvojne strategije NIS-a i energetske politike Srbije

Abstract

The continuous growth of energy consumption, intensive exploitation of non-renewable energy sources, geopolitical turmoil, global recession have resulted in the fact that the days of cheap energy are over. This paper discusses the problems and challenges the energy sector faces, with special emphasis on those related to the oil and gas sector in the world and in our country.

Serbian energy policy objectives, established by the new Energy Law, include the promotion of energy security, energy efficiency, competitiveness of the energy market, use of renewable energy resources and environmental protection. With regard to each goal, a series of regulatory measures, programs and acts have been adopted that comply with the requirements of European energy regulations. What follows is an intense work on the implementation of the adopted measures and programs. In terms of the implementation of the energy development strategy, "Naftna industrija Srbije" (NIS) is the most advanced. Therefore, the focus of this paper is on analyzing the development strategy of NIS in the context of the Energy Sector Development Strategy of the Republic of Serbia.

Key words: *energy sector, oil, natural gas, industrial policy, Energy Law, Energy Sector Strategy of the Republic of Serbia*

Sažetak

Kontinuirani rast potrošnje energije, intenzivna eksploatacija neobnovljivih izvora energije, geo-politička previranja, globalna recesija doveli su do toga da su dani jeftine energije prošlost. U ovom radu bavićemo se problemima i izazovima energetike koji se primarno odnose na sektor nafte i gasa u svetu i kod nas.

Ciljevi energetske politike Srbije, utemeljeni novim Zakonom o energetici, su unapređenje: energetske sigurnosti, energetske efikasnosti, konkurentnosti energetskog tržišta, korišćenja obnovljivih izvora energije i za-

štite životne sredine. Za svaki pojedinačni cilj usvojen je niz regulatornih mera, programa i akata koji su usklađeni sa zahtevima evropske regulative iz oblasti energetike. Ono što sledi jeste intenzivan rad na implementaciji usvojenih mera i programa. Na polju implementacije strategije razvoja energetike najdalje je otišla Naftna industrija Srbije (NIS). Stoga, u fokusu ovog rada biće analiza razvojne strategije NIS-a u kontekstu Strategije razvoja energetike Republike Srbije.

Ključne reči: *energetski sektor, nafta, prirodni gas, industrijska politika, Zakon o energetici, Strategija razvoja energetike Republike Srbije*

Introduction

Investment in the energy sector is an investment in the development of the entire economic system of a country. Without access to adequate and cost-effective energy resources no economy can count on significant growth, based on increased production of tradable goods and investments [15, p. 99]. Oil is the most valuable source of energy. Oil is a "strategic resource" without which the highly industrialized society cannot survive, and whose availability must be provided, if necessary, even by using military force. None of all other possible resources can provoke a conflict between states in the 21st century as oil can (and does) [17, p. 1]. The majority, or more than 80% of total energy, is derived from non-renewable fossil fuels, and a significant change is unlikely to happen by 2030, not even by 2050 either. The International Energy Agency (IEA) forecasts that the share of oil and gas in total energy consumption will be reduced from 58%, at

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present, to about 51%. This, however, does not mean that oil consumption will also be reduced, on the contrary. This is a consequence of the expected increase in the production of energy from alternative (renewable) resources, which will only change relative shares in the overall energy mix. The IEA forecasts that by 2030 world oil consumption will have increased to 106 million barrels per day. To satisfy a growing trend of consumption, it is necessary that by 2030 we invest and build production capacities six times larger than the current production potential of Saudi Arabia, until recently, the global leader in oil production [18, p. 6].

The energy position of EU countries is far from enviable. The activities of oil companies in the EU are governed by a number of regulations that hinder their operations and reduce their competitiveness compared to other parts of the world. These are: the European Commission Directives (on trade, fuel quality, industrial emissions, etc.), the Roadmap for moving to a competitive low-carbon economy, the White Paper on the future of transport and others. Rigorous EU regulations could force the refining sector to reduce its capacity and/or to relocate, which will adversely affect the security of supply, competitiveness of the EU and employment [18, p. 10]. It is estimated that EU energy import dependency will increase from the current 50% to 65% in 2030. In the same period, oil imports are expected to rise from 82% to 93% and imports of gas to rise from 57% to 84% [1]. The future prospects of EU energy policy lie in renewable energy resources, since the EU is a global leader in this energy sector with a turnover of EUR 20 billion and 300,000 employees¹.

Energy sector of Serbia includes: oil and gas, coal mines, electric power industry and decentralized systems of district heating plants and industrial energy. The following data best illustrate the role and importance of the energy sector in Serbia: it generates 7.5% of GDP, employs about 80,000 people, increases the trade deficit by more than USD 3 billion, and annual total investment by this sector exceeds EUR 500 million [15, p. 99]. Consequently, any halt or postponement of investments in the energy sector would jeopardize energy security and economic prospects for Serbia.

The oil sector comprises the activities related to

exploration and exploitation of domestic oil reserves, import, transport and refining of crude oil and petroleum products, as well as distribution and sales/exports of petroleum products. The declining trend of domestic exploration and exploitation of oil and gas is a result both of underinvestment in research projects and obsolete technology. This trend has started to change with the arrival of Gazprom, which is discussed at a greater length in the second part of this paper. The total installed generation capacity of domestic refineries is around 7.8 million tonnes per year (4.8 million tonnes in Pancevo and 3 million tonnes in Novi Sad). Their operating capacities are reduced as a result of the 1999 bombing and at present amount to 6.6 million tonnes per year [6].

The scope and structure of energy reserves and resources of Serbia are unfavorable because high quality energy reserves such as oil and gas account for less than 1% of the total balance reserves. Almost the entire energy reserves consist of various types of coal, dominated by low-quality lignite (92%). Serbia's energy sector is characterized by lack of harmonization between consumption and production of adequate energy generating products, especially during the winter when energy demand exceeds the production capacities of electric power facilities and district heating plants. This situation is a consequence of decades-long underinvestment in maintenance and modernization of the existing energy infrastructure. It is estimated that the geological reserves of oil and natural gas amount to 60 Mtoe, while mineable reserves amount to 20 Mtoe. Serbia's most important renewable energy source is its hydropower potential with around 17,000 GWh, of which about 10,000 GWh have been used so far. It is estimated that the total energy potential of renewable energy resources (biomass, hydropower potential, geothermal energy, wind and solar energy) in Serbia is quite considerable and amounts to over 3 Mtoe per year [6].

Industrial policy in the energy sector

One of the greatest issues affecting oil industry is oil price volatility. Oil prices reached a record high of 145 dollars per barrel in July 2008, early in 2009 it dropped down to about 40 dollars per barrel and in 2010 it soared to over

1 In wind energy, EU companies have 60% of the world market share [1].

100 dollars per barrel [18, p. 16]. Brent crude oil price on 26 November 2012 amounted to about 111 dollars per barrel². Volatility of oil prices is caused by the global economic and financial crisis. A decline in the consumption of oil was accompanied by a growth in production. Economic logic says that when a growth in supply is accompanied by a decrease in demand prices of goods fall, but that did not happen this time³. Analysts and experts explain the high oil price in various ways. According to the IEA, this is an outcome of stronger investment in raw materials on stock exchange. Large investors and stock exchange speculators withdrew their funds from the depressed real estate markets and redirected them to oil and other raw materials (wheat, gold, etc.) [18, p. 17].

The recession has led to profound changes in the global energy sector. Russia has become global leader in the production and export of oil, replacing Saudi Arabia. China has also exploited its position and has become the world's largest consumer of energy due to the expansion of its national companies and major investment, replacing the United States. All this has been achieved with direct financial and political aid from the governments of Russia and China. At the same time, Europe's refineries have been struggling to maintain profitability, while in the United States five major refineries have been closed [18, p. 18].

The emergence of the economic crisis, followed by a slow and uncertain recovery, has led to significant changes not only in the global market environment, but also in the rules of competition. After decades of advocacy and faith in the action of "the invisible hand of the market", once again we have witnessed a situation where the state undertakes support measures and makes market interventions. It has become clear even to the most obstinate market fundamentalists that market imperfections, further intensified by global economic crisis, cannot be solved without an adequate support from the government. Industrial policies are one of the effective instruments.

The theoretical foundation for a new model of industrial policy in the developed economies has been found in the theory of endogenous growth, as the dominant

contemporary theoretical option for defining development policy, particularly the industrial one. In modern economic theory, industrial policy involves the application of a set of measures and policies implemented by public institutions in order to create a favorable business environment, and encourage creation of new enterprises [8]. The aim of these measures is to establish an institutional framework that will help strengthen small and medium-sized enterprises, encourage innovation and investment in order to contribute to the improvement of economic competitiveness.

Industrial policies often promote cooperation between companies, between companies and the state, as well as cooperation between different countries. As a reminder, the initiative for the establishment of the EU came from a joint industrial policy in the field of coal and steel, which was later extended to nuclear industry as well. Governments of many countries have long realized the importance of the energy sector and have been active not only as regulators, but also as strategy developers, partners and investors. "Energy is too important to be left to the market!" is Robinson's famous statement on energy [16, p. 2]. Governments need well-articulated strategies to provide the specific inputs that markets need in order to foster the structural transformation that drives economic development [9].

In order to enhance their competitive advantages, many private and state-owned enterprises enter strategic partnerships. National oil companies usually offer access to resources, while multinational companies take the risks, bring money, knowledge, technology, and manage complex projects. A proof that interests can reconcile even the biggest rivals is the "historic" partnership between America's and the world's largest oil company (Exxon Mobil) and Russia's largest state-owned oil company (Rosneft), concluded in August 2011. The result of this partnership is the establishment of the Arctic Research and Design Center for Offshore Development (ownership structure is 33.3%: 66.7%) to be used in the "inaccessible" part of the world [20, p. 4]. There are numerous examples of successful cooperation between national and multinational oil companies [20, p. 16]:

- BP and Statoil have established a joint venture for the exploration and production of oil in the world,

² See: <http://www.oil-price.net/index.php?lang=en>

³ Already in 2008, oil consumption fell by 1 million barrels a day.

- ADNOC (Abu Dhabi) and Occidental (60:40) have a 30-year contract for the exploitation of one field in the south of the country,
- Conoco Phillips has acquired 9.9% stake in LUKOIL,
- Eni and PetroChina have signed a Memorandum of Understanding to develop unconventional energy resources in China and abroad, and so on.

A large number of developed countries, especially developing countries, have long recognized the importance and effectiveness of industrial policies, whose effectiveness is reflected in the success and position of their players (companies, sectors). Therefore, the usefulness and the necessity of the implementation of industrial policies in Serbia are indisputable, but the only question is how to prepare and implement industrial policy measures in order to avoid mistakes from the past, support economic development and achieve the desired changes in economic structure [23, p. 63].

The primary strategic goal of Serbia is sustainable and dynamic development of the industry, which should be fit for the single EU market and able to cope with competitive pressure from its market players [8]. A new model of industrial growth in Serbia for the period 2011-2020 is export-oriented and includes: dynamic increase in investment, high rates of exports of goods and growth of industrial employment. Economic recovery and economic growth in Serbia must be based on investments in activities where there is already a competitive advantage. Comparative advantage should be transformed into a competitive advantage by applying adequate measures. According to [3], [4], the first place in the priority list belongs to energy sector, followed by agriculture, food processing industry, telecommunications, infrastructure⁴, logistics and tourism. Pierce Riemer, the Director General of the World Petroleum Council, points out that due to many uncertainties that the energy sector faces, there is no universal solution that can address all the challenges, but we need a synergy of three factors: investment, innovation and collaboration [18, p. 6]. Sustainable economic growth

and macroeconomic stability in Serbia are not achievable without a steady growth of the energy sector, its impact on imports/exports, and thus on the balance of payments.

The new legislative framework of the Serbian energy sector is in full compliance with the EU legislation, regional regulations and international principles of creating non-discriminatory conditions for transmission, transport and trade of electricity and natural gas in the entire region. Guiding principle for the development of the energy system in Serbia is the Energy Sector Development Strategy of the Republic of Serbia by 2015 (hereinafter referred to as the Strategy). The main elements of the Strategy are objectives, priority programs, measures and instruments for the implementation of priority programs, i.e. Serbia's energy policy/strategy objectives [6]. The objectives are set and differentiated into three groups: basic – energy objectives; specific – technological and environmental objectives and general – development and strategic objectives. In order to achieve these objectives, the Strategy defines five priority programs: 1) continuous technological modernization of the existing power generating facilities, infrastructure and resources, 2) rational use of good quality energy generating products, and 3) the use of renewable energy resources and the use of modern energy-efficient and environmentally sound technology; 4) extraordinary investment in new electric power sources, and 5) the construction of new energy infrastructure, and its integration into national and regional energy system.

The development of the energy sector in Serbia designed in the Strategy is based on two scenarios: a dynamic and slow economic growth. Unfortunately, the non-anticipated global economic and financial crisis has made even the slowest development scenario too optimistic, so that the projections do not reflect reality. The main result is that the implementation of individual projects had to be postponed, and only the top priority projects need to be implemented in the newly adopted, feasible deadlines [10].

The Strategy must be implemented in accordance with the Energy Law and the Mining Law, and under the supervision of the competent Ministry and the Energy Agency, with the support of the Energy Efficiency Agency. The key innovation in the Energy Law [7] is the separation

⁴ An important goal for the country is to build roads and infrastructure network since their active construction in Bulgaria, Romania, Turkey and other countries has endangered Serbia's role of the main transit player in the region. Ignoring this fact would certainly jeopardize the energy sector, and the economy in Serbia as a whole.

of competences for the formulation of energy policy and competences for its implementation. Also, the new law stipulates the restructuring of public energy companies, abolishes monopolies and introduces market competition in the energy sector, where it objectively may exist. In industries where there is a natural monopoly, the activities of these companies must be under the supervision of the Energy Agency, as an independent state institution.

Unlike the electricity market, the oil market has been liberalized since 1 January 2011. Since import barriers have been removed and the state no longer regulates the prices of petroleum derivatives, conditions have been created to open Serbia's petroleum products market. The EU accession process and the process of European partnership have also contributed to the liberalization of the petroleum products market towards the creation of the conditions for free trade in petroleum products. The expected reduction in oil prices, due to increased competition in the domestic market, did not happen since the beginning of the period of liberalization of petroleum products retail prices in Serbian market coincided with the rise of crude oil prices and the dollar exchange rate.

The adopted Strategy of development must be amended by a series of measures (industrial policy) that will directly or indirectly support and energize the development of important, strategic players in our economy. The reason for this is the fact that market liberalization and open market competition themselves do not lead to increased competitiveness of companies and local economy, in the conditions when big foreign players enjoy the support of their sovereigns and there is a significant structural imbalance in economy. One of the strategic players in the domestic economy is NIS (Petroleum Industry of Serbia), and its importance and role in the energy sector and the overall economy of Serbia, will be analyzed in the next part of the paper.

Place and importance of NIS in the energy sector of Serbia

NIS in its present form was established in 1991 as a company for exploration, production, refining and sale of oil, petroleum products and natural gas. The company

that preceded NIS was Naftagas, established back in 1949. The historic core activities of NIS are the exploration and exploitation of oil and gas, and in this sense it is the only company in Serbia engaged in these activities. In this company's history the important dates are:

- Beginning of the exploitation of natural gas in 1951,
- Beginning of the construction of the first filling stations in 1953,
- Start up of the refineries in Pancevo and Novi Sad in 1968,
- Beginning of oil production in Angola (concession) in 1985,
- Becoming a joint stock company in 2005,
- Gazprom Neft became the owner of 51% of NIS shares and the company was listed in Belgrade Stock Exchange in 2010,
- Construction of a complex for hydro-cracking and hydro-treating in Pancevo Oil Refinery, which started the modernization of NIS refineries in 2011.

NIS a.d. Novi Sad is one of the largest vertically integrated energy companies in Southeast Europe. It includes a range of activities in the value chain characteristic of the oil industry. Precisely, NIS covers exploration, production and refining of oil and gas and sales of petroleum products. In addition, NIS makes new breakthroughs in the field of energy in terms of the design and implementation of the projects in the field of renewable energy. This means that today NIS is walking down the road of transformation from an oil company to an energy company with a vision to "become a leader in Europe, not only in the oil and gas industry, but also in the energy sector" [12, p. 7].

All activities of NIS are organized within blocks, with decentralized and centralized functions suggesting a hybrid organizational model that provides a high level of efficiency on the one hand, and flexibility that leads to effectiveness, on the other. There are five business units called blocks. These are: Upstream, Oilfield Services, Refining, Sales and Distribution, and Energy.

Since its establishment, NIS took up the position as one of the most important companies in the energy industry of the Republic of Serbia, and the position of the most important company in the oil and gas sector. Today's picture of the place and importance of NIS in the Serbian

energy sector could be viewed through an analysis of its market position, capital investments, financial results and its contribution to creating value for the owners, particularly in the period since the last substantial transformation of its ownership structure in 2008.

On 24 December 2008, the Republic of Serbia and Gazprom Neft signed the Contract on Sale and Purchase of Shares of the NIS. Under this agreement, Gazprom Neft has acquired 51% of the total share capital of the Company for a total amount of EUR 400 million [2]. On this day, the owner of 49% of the capital remained the Republic of Serbia. Regardless of the minority ownership, the Republic of Serbia as the Seller has retained a significant level of participation and accountability in governance, although the responsibility for the operational management of the company was transferred to the Buyer. The Contract stipulates that as long as the Republic of Serbia owns at least 10% of shares in the share capital of NIS, a positive vote is required from the Seller with regard to the following: adoption of financial and audit reports, changes in the Founding Act in the Statute of the Joint Stock Company, increase and decrease of capital, changes in status, acquisition and disposal of the Company's high value assets, changes in the seat and core business activity, liquidation or bankruptcy. Under the same conditions, the Seller (the Republic of Serbia) has the right to appoint the Internal Auditor of the company or to appoint the Chairman and the majority of the members in the Supervisory Board of the Company.

The Buyer, among other things, has taken on considerable social and investment obligations. In terms of investment obligations, the Contract stipulates that the buyer is required to provide an amount of EUR 500 million through loans until 31/12/2012, at an interest rate equal to EUR LIBOR Twelve + 2% at 14 years. The Contract also defines the strategic intent of the Seller. Thus, it stipulates that by 2020 the Buyer shall (depending on cooperation with the Seller) make commercially reasonable efforts to ensure: continuity of production and investment in exploration activities, that NIS shall not cease to operate in the Company's refineries, that the amount of crude oil in NIS can satisfy the demand of domestic market for basic petroleum products, that the market share of trade

in derivatives in the Serbian market shall not be lower than the level that NIS had in this market in 2008. Also, the Buyer shall implement the program of reconstruction and modernization in NIS.

In terms of the obligations to the owners, the Contract stipulates that the Buyer shall distribute the dividends of NIS for each fiscal year in the amount of not less than 15% of net income per year⁵. On 06 January 2010, pursuant to the decision of the Government of the Republic of Serbia, 19.08% of the share capital or 31,116,611 shares were transferred to the minority shareholders, i.e. the citizens of the Republic of Serbia, the employees and former employees of NIS. Following the submission of bids for the purchase of the shares of minority shareholders, the minority shareholders deposited 5.15% of their shares until the closing date for the bid on 16 March 2011, after which date these shares were bought back, resulting in a new ownership structure: Gazprom Neft 56.15%, The Republic of Serbia 29.87% and minority shareholders 13.98%.

The number of state-owned oil companies that have been privatized, i.e. which sold the majority of the capital, is not negligible. Apart from NIS, with a similar share of the state-owned capital (about 30%), the following companies have also been privatized: OMV (30% Austria), Hellenic Petroleum (35% Greece), Eni (30% Italy), Inpex (29% Japan) and others [24]. There has been an extensive research related to comparing profitability of the state-owned and private oil companies, as well as how privatization affects the performance of oil companies. The results of such research, presented by Victor [22], Eller et al, [5] and Wolf [24] suggest that privatization leads to an increase in the financial and operational performance of oil companies, i.e. that private companies are more efficient than the state-owned ones. Such a thesis is confirmed by the privatization of NIS as well.

The total number of shares is 163,060,400 with nominal value of RSD 500. All shares are ordinary shares. Each share is entitled to one vote in the shareholders' meeting. On 12 December 2012, the market value of a share was

5 NIS operated at a loss 2008 and 2009, and there were no dividend payments. In 2010 and 2011 NIS operated with profit, but the Managing Board decided to allocate the profits for covering the losses from previous years.

RSD 735. Among other things, NIS has won the award for the best relations with the investment community and quality of corporate governance, given by Belgrade Stock Exchange for two consecutive years (2011 and 2012).

The analysis of the market position that NIS takes in Serbian market, examines the derivatives market excluding the derivatives that NIS does not produce. In 2010, this market in the Republic of Serbia accounted for 3,356 thousand tonnes, and in 2011, it accounted for 3,224 thousand tonnes, which shows a decline of 3.9%. The data for the first nine months of 2012 show that this market accounted for 2,167 thousand tonnes, which is by 8% less than in the first nine months of 2011, when it accounted for 2,355 thousand tonnes. It is obvious that the bad economic situation and the general downturn in economic activity had a significant negative impact on the consumption of petroleum products. The overall drop in purchasing power as a result of the reduction in real wages due to inflation trends and the depreciation of the local currency with high unemployment rates have intensified the negative impact and led to the cumulative contraction of the oil product market in Serbia, observed in two years, will reach around 12%.

NIS has a leading position in the derivatives market of the Republic of Serbia. It is about 70%. In 2010, it accounted for 67.9%, or 2,280 thousand tonnes, and in 2011, it accounted for 68.3%, or 2,202 thousand tonnes, and for the first nine months of 2012, it amounted to 71.4% or 1,547 thousand tonnes. These results indicate that NIS has retained its dominant position in the market after 01 January 2011, until which date the Seller had the contractual obligation to maintain restrictions on imports of petroleum products.

In 2010, the retail market of the Republic of Serbia accounted for 1,593 thousand tonnes, in 2011, it accounted for 1,640 thousand tonnes, and for the first nine months of 2012, it accounted for 1,193 thousand tonnes. Therefore, in 2011, this market grew by 3% compared to 2010, while in 2012 it records sales at approximately the same level as in 2011. In the retail market in 2010 the share of NIS was 35.2%, with sales of 560 thousand tonnes. In 2011, NIS reported a share of 31.7% with the sale of 519 thousand tonnes. This decline in market share is attributed to the

significant substitution of the D2 fuel with fuel oil (quite inexpensive fuel that is not subject to the excise regime), liberalization of imports, leasing 69 filling stations and renovating the existing stations. However, in the first nine months of 2012 already, the share of NIS in retail increased to 35.4% as a result of the reconstruction of the filling stations under the brand of NIS Petrol, a new brand of the restaurants and shops and so on. At the same time, a positive effect reflected in market share growth is also attributed to the "low cost" strategy which involves lower price offers from NIS compared to its direct competitors.

The financial position of NIS today is a direct result of internal factors in terms of the efforts made in the implementation of the adopted development strategy and restrictions originating from general and competitive environments. At the end of 2011, NIS recorded improvement of financial indicators as compared to 2010, and this trend was maintained in the first three quarters of the 2012. The summary of financial indicators is provided in the Table 1.

In the first nine months of the 2012, the realized net profit was RSD 32.2 billion, which is an increase of 18.6% compared to the same period last year when net profit amounted to RSD 27.1 billion. If we observe the EBITDA indicator, NIS has achieved a significant growth. For the first nine months of 2012, the EBITDA amounted to RSD 48.1 billion, which is more than in the same period of 2011 when this indicator was RSD 32.3 billion by 49%. The improvement of these indicators during this period of observation is attributed to the following accomplishments in business processes:

- The growth of domestic oil and gas production,
- The growth of sales revenue and market share growth,

Table 1: Financial indicators of NIS

Financial indicators	2011	2010	Change
Net profit, bln. RSD	40,6	16,5	+146%
EBITDA, bln. RSD	52,4	32,4	+62%
Sales (excise tax excluded), bln. RSD	186,9	161,2	+16%
OCF, bln. RSD	35	17,8	+97%
CAPEX, bln. RSD	34,4	19,7	+75%
Total debt to banks, mln. USD	446	611	-27%
Total bank indebtedness (total debt+credentials), mln. USD	458	644	-29%

Source: [12, p. 60]

- Cost reduction (increased operational efficiency),
- Increased collection of liabilities,
- Lower imports of crude oil⁶.

In accordance with the Contract on Sale and Purchase of Shares, NIS made capital investments together with the new owners, which increased its competitiveness, all in accordance with the Adopted Business Model and Development Strategy from 2011. The major investments are in the Upstream sector with the aim of increasing oil and gas production and increasing reserves. In the domain of refining, investments are directed to the reconstruction and modernization of the oil refinery in Pancevo and environmental projects. In the field of sales and distribution, investments are focused on the development of the retail network.

In 2011 and 2012, as planned, NIS performed the overhaul of the oil refinery in Pancevo. A new facility for hydro-cracking (MHC/DHT) was commissioned, which results in the quality of petroleum products in accordance with the Euro-5 standard. For this capital investment and investment in overhauling the refinery in Novi Sad and environmental projects, NIS borrowed from its parent company Gazprom Neft in the amount of EUR 500 million. The amount of capital expenditure (CAPEX) in 2011 was RSD 34.4 billion. At the same time, simultaneously with capital investments, NIS allocated substantial funds to investment in socially significant projects. This orientation of the company is the result of the adopted philosophy and practice of sustainable development.

Analysis of the development strategy of NIS in the context of the Energy Sector Strategy of the Republic of Serbia

The Serbian energy policy objectives, established by the new Energy Law [7], are the promotion of energy security, energy efficiency, competitiveness of the energy market, use of renewable energy resources and environmental protection. For each goal, a series of regulatory measures, programs and acts have been adopted that comply with

the requirements of European energy regulations. What follows is an intense work on the implementation of the adopted measures and programs.

In terms of the implementation of the energy development strategy, NIS is the most advanced. The objectives and long-term development strategy of NIS reflect the expectations and interests of the majority shareholder. The main goal of NIS is to become the most effective, fast-growing, energy-efficient company in the field of the production of energy generating products, oil, gas, petroleum products and petrochemicals, while maintaining a leading position in the Serbian market and securing a significant market share in the market of Southeast Europe. The new Development Strategy of NIS is based on five components of success, the so-called “5 Fives” and implies that the following is realized by 2020: annual production of 5 million tonnes of crude oil and gas, 5 million tonnes refined, 5 million tonnes of petroleum products sold, the value of one share of 5 thousand dinars, and the Euro-5 standard of processes and outcomes. The realization of such goals without a doubt leads to the achievement of the macro objectives of the Serbian energy policy listed above. In other words, the goals and development strategy of NIS are complementary to the Energy Sector Development Strategy of the Republic of Serbia.

Improving energy security is the primary energy sector goal of Serbia, and also the mission of NIS. In 2011, the energy import dependency of Serbia amounted to about 30%, while the dependency on imported oil was also very high and was around 70%, while the dependency on gas imports was as much as 86%. In such circumstances, energy stability can be provided by forming adequate reserves⁷ and by diversifying the supply sources. With the privatization of NIS, i.e. with increasing levels of domestic production of oil and petroleum derivatives, dependency on import is reduced year after year, so that, compared to the level before privatization (2008) Serbia’s dependency on oil imports fell by about 23%. A summary of the trends in the key energy indicators in Serbia in the past six years is given in Table 2.

⁶ There was also a reduction in total indebtedness to banks, which at the end of Q3 of 2012 amounted to 354 million USD and total indebtedness to banks on that same day was 367 million USD.

⁷ The total storage capacity for crude oil and petroleum products in Serbia is about 1.4 million m³.

According to its development strategy, NIS is planning to achieve the volume of oil production of 3 million tonnes per year by 2020, of which the share of domestic production is going to be between 30-50%, while the rest will be manufactured in the neighboring countries (concessional production). In the same period, the plan is to process and sell 5 million tonnes of petroleum products per year, which is double the current level, as well as to provide reserves covering 10 years of current production [19]. The implementation of these plans will provide long-term energy stability for Serbia. Not only will it reduce imports, but will result in export growth, which will significantly improve Serbia's foreign trade indicators. In order to raise the level of production and secure strategic oil and gas reserves, NIS has allocated significant resources to the research of energy resources, not only in the area of the Pannonian basin, but also in new potential sites to the south of the Sava and Danube rivers. Its activities go beyond national borders. Since 2011, NIS has expanded its scope by establishing strategic subsidiaries in the neighboring countries, in the Republic of Srpska, Bulgaria, Romania and Hungary. Also, NIS is the first Serbian company to open an office in Brussels in an effort to help Serbia's European Integration and to affect the energy policy of sound and sustainable development.

The business activities of NIS are not only the foundation of energy stability, but also of the financial stability for Serbia, since it is the largest contributor to the budget. The excise taxes are an important source of finance for the Republic of Serbia with the share of about 23% of total public revenues. Most of the excise revenue is collected from the excise taxes on petroleum products. In 2011, on this basis, NIS contributed about 81 billion dinars, which represents about 11% of Serbia's total budget revenue. In June 2011, the Excise Tax Law was amended to ensure its compliance with the EU standards. The Law stipulated equal excise taxes for domestic and import fuel, i.e. equal excise taxes were set for all types of engine petrol (gasoline) and diesel fuel, which led to an increase in the excise tax on the fuel processed in local refineries. With respect to the strategic plan, it is expected that the doubled production and distribution of petroleum products by 2020 will bring Serbia the reciprocal increase in budget revenues.

In addition to being the largest taxpayer, NIS is one of the largest investors in Serbia. In the past three years, NIS has invested EUR 1.5 billion (EUR 500 million annually), and plans to invest the same amount over the next three years. The most important and the most valuable project is the modernization of the processing facilities and the

Table 2: The main energy indicators of Serbia

Parameters	2006	2007	2008	2009	2010	2011
Total primary production (Mtoe)	8.847	8.796	9.441	9.487	10.539	11.073
Solids	7.044	7.12	7.369	7.33	7.228	7.779
Oil	0.655	0.64	0.66	0.686	0.94	1.103
Natural gas	0.21	0.2	0.231	0.232	0.308	0.412
Renewable energy sources	0.938	0.836	1.181	1.239	2.063	1.779
Net import (Mtoe)	5.843	6.127	6.713	5.559	5.241	5.203
Solids	0.955	0.899	0.945	0.619	0.727	0.761
Oil	2.593	2.638	3.074	2.636	2.006	1.457
Oil products	0.635	0.888	0.912	0.903	0.941	1.27
Natural gas	1.66	1.702	1.782	1.401	1.567	1.715
Gross inland consumption (Mtoe)	14.571	14.811	15.619	14.658	15.531	16.186
Solids	7.999	8.019	8.13	8.026	7.751	8.54
Oil	3.764	4.054	4.291	3.956	3.901	3.904
Natural gas	1.87	1.902	2.013	1.55	1.852	1.996
Other	0.938	0.836	1.185	1.126	2.027	1.746
Gross inland consumption/capita in toe/inhabitant	1.955	1.993	2.094	1.973	2.134	2.224
Total energy import dependency (%)	40.1	41.37	42.98	37.92	33.75	32.15
Oil import dependency (%)	85.76	86.98	92.89	89.46	75.54	69.85
Natural gas import dependency (%)	88.77	89.48	88.52	90.39	84.61	85.92

Source: [modified 11, p. 313]

construction of a hydro-cracking and hydro-treating plants in the refinery in Pancevo. In the scope of this project, they have also completed the construction of storage tanks for liquefied petroleum gas which will also have the capacity to store (reserves) of at least 6,000 m³ of liquefied petroleum gas.

In completing the modernization of the refinery in Pancevo, Gazprom Neft, as the strategic partner, has fulfilled its obligation under the agreement on strategic cooperation in the energy sector, which was signed between Serbia and Russia in 2008. At the same time, NIS operated with a net profit of RSD 16.5 billion in 2010, i.e. RSD 40.6 billion in 2011, with a trend of growth in 2012. The realized profit always raises the issue of the dividend policy. In previous years, the profit was used to cover the losses from previous years and to fund the company's development.

The completion of construction and commissioning of the newly constructed plant in Pancevo allowed NIS to produce fuels which are entirely in keeping with the highest EU standards. Also, the portfolio of petroleum products will be significantly changed, i.e. improved. The total production will be dominated by high-quality fuels such as Euro Diesel, whose share will increase from the current 8% to 39% in 2013, followed by the primary petrol and engine petrol. On the other hand, the D2 diesel, which now accounts for 25% of total fuel, will be completely

eliminated from the production (see Figure 1). In a relatively short period of time, the competitiveness of the Serbian energy market will be increased to a higher level.

An integral part of the effective management strategy in NIS is sustainable development and environmental protection. Modernization of the existing and construction of new infrastructural facilities and power plants in NIS have been done in compliance with the principles of sustainable development. In the period 2010-2012, more than EUR 7.4 million was invested in the improvement of the environment, which allowed the installation of the most modern monitoring systems and increased the level of environmental safety [14]. The consequences are already visible: the emission of solids is reduced by almost 3 times, the refining complex in the refinery has been reconstructed, and the number of environmental accidents has been reduced by 24% [13, p. 5]. In addition to these measures, which increase the environmental protection during the manufacturing process, by enabling final consumption of fuels that comply with the highest environmental standards, NIS indirectly contributes to reducing the emissions.

NIS does not just expand in terms of geography, but also through diversifying its operations by penetrating the related business. NIS has started cooperation with the state-owned company "Petrohemija" in the production of

Figure 1: Planned change in the NIS petroleum products portfolio

Source: [modified 21, p. 9]

base oils, which is why the project to adapt the capacity of the refinery in Novi Sad is being designed. Next year, they are going to start building the plant for the production of base oils in this refinery, whose value will be about EUR 100 million [14].

One of the new directions for the development of NIS in the future is renewable energy resources. In accordance with the requirements of the *Renewable Energy Sources Directive* (2009/28/EC), Serbia is obliged to continual development of the energy production from renewable energy resources with the aim that the total share of renewable resources in final energy consumption is at least 20% by 2020. Last year, NIS formed a block called "Energy", which is supposed to offer new prospects to the company. The activity of this center is the production and sale of electricity and heat energy from cogeneration and renewable energy resources (biomass, wind and thermal water). Together with its strategic partners, NIS was expected to invest at least EUR 35 million this year [19, p. 6], nevertheless, significant effects of this energy industry are to be expected in a few years.

Finally, an important prerequisite for the development of this branch of the energy sector in the country and the region is to build adequate infrastructure to facilitate the transportation of oil and gas. Transportation of oil derivatives in Serbia is mostly done by tank trucks (65%), inland waterways and to a lesser extent by rail [11, p. 320]. There are two strategic development projects in this area, the implementation of which is yet to come, and these are the petroleum product pipeline construction and Pan-European Oil Pipeline construction.

Conclusion

A large number of developed countries, especially developing countries, have long recognized the importance and effectiveness of industrial policies, whose effectiveness is reflected in the success and position of their players (companies, sectors). Governments of many countries have long realized the importance of energy and have been active not only as regulators, but also as strategy developers, partners and investors. Therefore, the usefulness and the necessity of the implementation of industrial policies in Serbia are

indisputable, but the only question is how to prepare and implement industrial policy measures in order to avoid mistakes from the past, support economic development and achieve the desired changes in economic structure.

Economic recovery and economic growth in Serbia must be based on investments in activities where there is already a competitive advantage. Comparative advantage should be transformed into a competitive advantage by applying adequate measures. According to Đuričin [3], [4], the first place in the priority list belongs to energy sector, followed by agriculture, food processing industry, telecommunications, infrastructure, logistics and tourism. Due to many uncertainties that the energy sector faces, there is no universal solution that can address all the challenges, but we need a synergy of three factors: investment, innovation and collaboration. Sustainable economic growth and macroeconomic stability in Serbia are not achievable without a steady growth of the energy sector, its impact on import/export, and thus the balance of payments.

Serbian energy policy objectives, established by the new Energy Law, are the promotion of energy security, energy efficiency, competitiveness of the energy market, use of renewable energy resources and environmental protection. For each goal, a series of regulatory measures, programs and acts have been adopted that comply with the requirements of European energy regulations. In terms of the implementation of the energy development strategy, NIS is the most advanced.

The main goal of NIS is to become the most effective, fast-growing, energy-efficient company in the field of the production of energy generating products, oil, gas, petroleum products and petrochemicals, while maintaining a leading position in the Serbian market and securing a significant market share in the market of the Southeast Europe. The new Development Strategy of NIS is based on five components of success, the so-called "5 Fives" and implies that the following is realized by 2020: annual production of 5 million tonnes of crude oil and gas, 5 million tonnes refined, 5 million tonnes of petroleum products sold, the value of one share of 5 thousand dinars, and the Euro-5 standard of processes and outcomes. The realization of such a goal without a doubt leads to the achievement of the macro objectives of the Serbian energy policy listed above.

With the privatization of NIS, i.e. with increasing levels of domestic production of oil and petroleum derivatives, dependency on import has been reducing year after year, so that, compared to the level before privatization (2008) Serbia's dependency on oil imports fell by about 23%. The implementation of "5 fives" plans will provide long-term energy stability for Serbia. Not only will it reduce imports, but will result in export growth, which will significantly improve Serbia's foreign trade indicators. In order to raise the level of production and securing strategic oil and gas reserves, NIS has allocated significant resources to the research of energy resources, not only in the area of the Pannonian basin, but also in new potential sites to the south of the Sava and Danube rivers. Its activities go beyond national borders. Since 2011, NIS has expanded its scope by establishing strategic subsidiaries in the neighboring countries, in the Republic of Srpska, Bulgaria, Romania and Hungary. Also, NIS is the first Serbian company to open an office in Brussels in an effort to help Serbia's European Integration and to affect the energy policy of sound and sustainable development.

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NIS is one of the largest investors in Serbia. In the past three years, NIS has invested EUR 1.5 billion (EUR 500 million annually), and plans to invest the same amount over the next three years. The most important and the most valuable project involves the modernization of the processing facilities and the construction of hydro-cracking and hydro-treating plants in the refinery in Pancevo. The completion of construction and commissioning of the newly constructed plant in Pancevo allowed NIS to produce fuels which are entirely in keeping with the highest EU standards. Also, the portfolio of petroleum products will

be significantly improved. Therefore, in a relatively short period of time, the competitiveness of Serbian energy market will be increased to a higher level.

In accordance with the requirements of the *Renewable Energy Sources Directive* (2009/28/EC), one of the new directions for the development of NIS in the future is renewable energy resources. Last year, NIS formed a block called "Energy", which is supposed to offer new prospects to the company. The activity of this center is the production and sale of electricity and heat energy from cogeneration and renewable energy resources (biomass, wind and thermal water).

Finally, sustainable development and environmental protection constitute an integral part of the effective management strategy in NIS. In the period 2010-2012, more than EUR 7.4 million was invested in the improvement of the environment, which allowed the installation of the most modern monitoring systems and increased the level of environmental safety. The consequences are already visible and significant. In other words, the goals and development strategy of NIS are complementary to the Energy Sector Development Strategy of the Republic of Serbia.

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